

## A worm runs through it

When a friend told Ivan Moore he couldn't make money raising worms, he accepted the dare and went into business. Ivan started M & J Worm Ranch to provide a clean, natural plant food for local farmers and gardeners. Starting with 25,000 worms, Moore found that the littlest helpers turned out to be the best workers.

Moore started his business in his parents' garage two years ago. Although there were some problems, he learned a lot as he developed care and feeding routines that led to success. Now, at the age of 21, he cares for more than 50,000 worms at a full-size "ranch" and office located in Valley Center, Kansas.

Moore waters the worms daily and feeds them corn silage,



although it isn't good to feed them meat and dairy products. The waste they produce, called castings, is a rich natural fertilizer for crops and gardens. The process of using worms to change waste plant material into soil is called "vermicomposting."

Moore calls his worms' waste product "Fertile Valley Worm Castings" and sells it to farmers who want pure, chemical-free food for their crops. He says a handful of worm castings tossed around the base of a plant is enough to improve the soil and help plants grow.

Want to know more about raising worms? Ivan Moore likes to take time away from the ranch now and then to share his knowledge with students.

If you want to start your own worm farm, Moore has worms for sale, or you can buy a complete starter kit with worms, a bin to keep them in, and an instruction manual. He can be reached at M & J Worm Ranch, 316-755-4826.





Twigs, sticks, pine cones, dried seed pods, and other found objects from outdoors may be used to make a one-of-a-kind photo frame. Make sure that you have an adult's help to trim the sticks and twigs to size! Here's what you'll need to get started:

- Twigs, sticks, and other dried objects from nature
- Glue
- Cardboard
- A special photo
- Twine
- Tape

Now, here's how to make your frame:

- 1. Cut a rectangular piece of cardboard.
- 2. Glue the photo in the center of the rectangular cardboard.
- 3. Cut the first twigs to fit right next to the photo along its two sides. Cut two more to fit along the top and the bottom of the photo.
- 4. Before you glue, make sure your cut twigs are the right size.
- 5. Glue the pieces securely to the cardboard everywhere they are touching the cardboard.
- 6. Moving outward, repeat steps three through five until you get to the edge of the cardboard.
- 7. Finish decorating your twig frame by gluing your other dried objects onto the front of the twigs.
- 8. Tape a length of twine to the back of the frame to create a picture hanger.

Reciyeling Rae

he	OICEIONARY COOP	IT'S O	
30°°	Guide words do exactly that. They guide you through the dictionary. Each dictionary page has two guide words. The upper left corner displays the first word on the page and the upper right displays the last word on the page.	MATTER	OF TIME

The words below will guide you in reducing your trash. On which page in the dictionary would you find them? (Secret—If you add all the page numbers, they should equal 3,723. Did you get it right?)

_	reuse	358	Banquet	34	Budget
	upgrade	†	Buffer	58	Cashier
	mend		Cobra	84	Crimson
	borrow		Detain	117	Earth
	rent		Kite	239	Mermaid
	trade		Reach	357	Reorganize
	reduce		Repaid	358	Royal
	concentrates durable		Segment	382	Transit
	refill			401	Vase
١	swap  Add them un		Twang	401	vase



Instructions: Mo and Sue run a computer repair shop in Mystery, Missouri. When they opened the shop this morning, they had a lot of voice mail messages. Each message included a specific time, but from a different time zone. Using the time zone map, help Mo and Sue answer these questions—and get everything done on time. (Hint: Mo and Sue's Missouri shop is in the Central time zone.)

1. "Hello, this is Micaela in Los Angeles. It's 5 p.m. here. Why aren't you in the shop? I need to know where I can get refurbished office furniture. Call me as soon as you get this message."

What time was it for Mo and Sue when Micaela called?

2. "Hi, Mom and Dad. It's Tim. I just made it down to Florida with my buddies. Thanks for the recycled T-shirt you packed in my bag! I'll call you tomorrow around noon."

At what time should Mo and Sue expect Tim's call?

3. "Hi, it's Rick calling from New York. I had a question about my computer repair. Call me back at 11:30 a.m. my time."

At what time should Mo and Sue call Rick?

4. "Hey, Mo and Sue. It's Mike in Kansas City. I'll be in Mystery at noon to pick up my scanner."

At what time will Mike stop at Mo and Sue's shop?

5. "This is Theresa in Denver. I'm going to be out of the office most of the day, but I really need to talk to you about the computer problem. I'll call you at 3:30 this afternoon."

At what time should Mo and Sue expect Theresa's call?



Instructions: Find the one fraction that is NOT equivalent to the others in each set. That fraction will lead you to the correct answer. We've done the first one for you.

1	Whata	an't vou	horrou	from	tha	lihrary?
	vviiai (:	anı von		11()111	me	mmarve

	$\frac{8}{12}$ books	$\frac{2}{3}$ video tapes	$\frac{1}{4}$ snacks	$\frac{12}{18}$ computer games		
2.	If you use both sides of	each sheet of paper, y	ou'll use	less paper.		
	$\frac{5}{25}$ 25%	$\frac{7}{30}$ 50%	$\frac{1}{5}75\%$	$\frac{10}{50}$ 100%		
3.	. Which is NOT a way to reduce your waste?					
	$\frac{3}{4}$ buy more	$\frac{6}{12}$ use less	$\frac{8}{16}$ reuse	$\frac{9}{18}$ recycle		
4.	. Trade is another word for					
	$\frac{2}{12}$ refill	$\frac{1}{6}$ mend	$\frac{4}{24}$ rent	$\frac{3}{36}$ swap		
5.	. When you use something again it is called					
	$\frac{1}{2}$ renew	$\frac{3}{6}$ rethink	$\frac{6}{14}$ reuse	$\frac{5}{10}$ reduce		
6.	Chips and candy are ch	neaper if you buy them	in	_		

 $\frac{5}{15}$  stores



**一 \*** 

 $\frac{3}{9}$  wrappers



 $\frac{2}{4}$  bulk

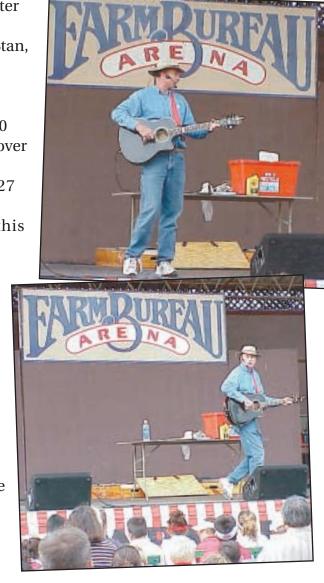


 $\frac{7}{21}$  single-serve bags

## **Environmental entertainer** sings for the planet

Has Stan Slaughter visited your classroom yet? Stan, a singing environmental entertainer, has performed at 280 Kansas schools over the past nine years—and at 27 schools in just three months this fall.

Slaughter uses music to educate elementary students and friends about reusing and recycling trash, singing such tunes as "Garbage Blues," "Excuse Me, Sir, That's My Aquifer," and "Don't Let the Goo Get You."



He performed at the Kansas State Fair in September, as part of the *Kansas Don't Spoil It!* Day activities. He also sings for schools, thanks to a grant from the Kansas Department of Health and Environment. He can come to your school, too! Teachers or principals should contact Maria Albert, malbert@kdhe.state.ks.us, for more information on how to book Slaughter's talent and timely message. Learn more about Stan on the Internet at www.stanslaughter.com.

**Keep Kansas Beautiful** 

Keep Kansas Beautiful is a new program in towns and cities across the state that involves citizens in developing a cleaner and more beautiful community. The program's mission is to reduce litter, clean up messy areas, teach about recycling, and encourage everyone to appreciate and preserve the beauty of Kansas.

Next spring, Keep Kansas Beautiful wants you to join in the Great American Clean-Up. The Great American Clean-Up asks people and groups, such as your class, to work together to clean up and beautify the community where they live. The clean-up event takes place from the beginning of March through the end of May every year.

You can start planning now for projects to do during the Great American Clean-Up. Here are some ideas:

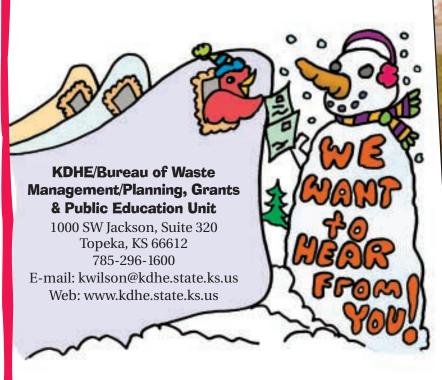
- Organize a cleanup on your school grounds.
- Get a group together and "Adopt-a-Park" by pledging to pick up litter several times a year in your neighborhood park.
- Adopt a neighborhood street and keep it looking clean throughout the year.
- Help park or school officials plant flowers or trees.
- Work with your town's recycling center to hold a recycling event at your school.

If you need help planning a project, your teacher can contact Keep Kansas Beautiful at 785-273-6808 or kkb@kansasbirp.com. The Keep Kansas Beautiful website will have more information as it gets closer to springtime, so visit www.keepkansasbeautiful.com.

Be sure to let us know what projects you do for the Great American Clean-Up and Keep Kansas Beautiful. Please send us pictures of your cleanup activities and we'll put them in a future issue of *Trash Talk!*. Mail photographs

to Marty Burke, KDHE Bureau of Waste Management, Planning and Outreach Unit, 1000 SW Jackson, Suite 320, Topeka, Kansas 66612.







Funded by Kansas

Department of Health &

Environment, Bureau of

Waste Management